RABINOVICH, Yu.Ya..

Appendicitis in ascariasis. Sov. med. 23 no.3:93-95 Mr '59.
(MIRA 12:4)

1. Iz Gornozavodskoy rayonnoy bol'nitsy Sakhalinskoy oblasti.
(ASCARIASIS, compl.
appendicitis (Rus))
(APPENDICITIS, etiol. & pathogen.
ascariasis (Rus))

SHLAPOBERSKIY, V. Ya., prof.; RABINOVICH, Yu. Ya., kand. med. nauk

Clinical aspects and diagnosis of Albright's syndrome. Khirurgiia 38 no.5:43-50 My '62. (MIRA 15:6)

1. Iz otdeleniya kostnoy patologii (zav. - prof. V. Ya. Shlapoberskiy) TSentral'nogo instituta travmatologii i ortopedii (dir. - deystvitel'nyy chlen AMN SSSR prof. N. N. Priorov[deceased])

(OSTEITIS FIBROSA)

RABINOVICH, Yu.Ya.

Extensive resection of the small intestine in a case of volvulus caused by Ascaris. Klin.med. 37 no.2:128-129 F '59. (MIRA 12:3)

1. Iz Gornozavodskoy rayonnoy bol'nitsy Sakhalinskoy oblasti.
(ASCARIASIS, compl.
intestinal obstruct., extensive resection of small intestine (Rus))
(INTESTINAL OBSTRUCTION, etiol. & pathogen.
ascariasis, extensive resection of small intestine (Rus))

RABINOVICH, Yu. Ya., kand. med. nauk; BIZER, V. A. (Moskva)

Mycetoma of the foot (Madura foot). Klin. med. 40 no.7:107-113 Jl '62. (MIRA 15:7)

1. Iz otdeleniya kostnoy patologii (zav. - prof. V. Ya. Shlapoberskiy) TSentral'nogo instituta travmatologii i ortopedii (dir. - deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR prof. N. N. Priorov[deceased])

(MYCETOMA)

Rabinovich, Yu. Ya

RABINOVICH, Yu. Ya.

K voprosu o blokade serdechno-aortal'nykh spletenii pri grudnoi zhabe. [On the block of cardio-aortal plexi in angina pectoris] Klin. med., Moskva 29:6 June 51 p. 64-6.

1. Of a group in the Department of Topographic Anatomy and Operative Surgery (Head--Prof. V. V. Kovanov), First Moscow Order of Lenin Medical Institute, Moscow.

RABINOVICH, Yu. Ya.: Cand Master Med Sci (diss) -- "The problem of osteogenic sarcomas". Moscow, 1959. 16 pp (Min Health USSR, Central Inst for the Advanced Training of Physicians), 200 copies (KL, No 6, 1959, 146)

RABINOVICH, Yu.Ya., kand. med. nauk; ARENBERG, A.A.

Maffucci's syndrome with transition into chondrosarcoma. Khirurgiia 39 no.5:51-56 My '63. (MIRA 17:1)

1. Iz otdeleniya kostnoy patologii (zav. - prof. V.Ya. Shlapoberskiy) TSentral'nogo instituta travmatologii i ortopedii (dir. - doktor med. nauk M.V. Volkov).

RABINOVICH, Yu.Ya., kand.med.nauk

Osteogenic sarcoma complicating Paget's disease. Khirurgiia 36 no.8:69-80 Ag '60. (MIRA 13:11)

1. Iz 1-y kafedry khirurgii (zav. - deystvitel'nyy chlen AMN SSSR zasluzhennyy deyatel' nauki prof. V.P. Braytsev) TSentral'nogo instituta usovershenstvovaniya vrachey na baze TSentral'noy klinicheskoy bol'nitsy Ministerstva putey soobshcheniya imeni N.A. Semashko (nach. A.A. Potsubeyenko).
(OSTEITIS DEFORMANS) (BONES—TUMORS)

RABINOVICH, Yu.Ya.

Chondrosarcomas and osteochondrosarcomas of the bone. Khirurgiia 35 no. 11:78-86 N '59. (MIRA 14:1)
(BONES--TUMORS)

RABINOVICH, Yu.Ya.

Differential diagnosis of osteogenic sarcoma. Vest.Khir. 84 no.6: 81-90 Je '60. (MIRA 13:12)

(BONES—TUMORS)

RABINOVICH, Yu.Ya.

Osteogenetic sarcomas. Nauch. rab. asp. i klin. ord. no.6:127-142 '60. (MIRA 14:12)

1. 1-ya kafedra khirurgii (zav. deystvitel'nyy chlen AMN SSSR prof. prof. V.R. Braytsev) TSentral'nogo instituta usovershenstvovaniya vrachey.

(BONES--CANCER)

RABINOVICH, Yu. Ya., kand. med. nauk (Moskva)

Maffucci's syndrome (dyschondroplasia associated with hemangiomas); survey of the literature. Khirurgiia 38 no.5:139-143 My '62. (MIRA 15:6)

(DYSCHONDROPLASIA) (MANGIOMA)

RABINOVICH, Yu.Ya., kand. med. nauk; SHAPIRO, Yu.V.

Clinical aspects and treatment in pachycarpine poisoning. Sov. med. 27 no.11:126-130 N '64. (MIRA 18:7)

1. Gorodskaya klinicheskaya bol'nitsa No.29 imeni Baumana (glavnyy khirurg - kand. med. nauk L.M.Shnaper), Moskva.

Rabinovich, Z.D.

USSR /Chemical Technology. Chemical Products and Their Application I-31

Fermentation industry

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32901

Author : Rabinovich Z.D.

Title : Industrial Selection of Champagne Yeast of Rough Variants

Orig Pub: Vinodeliye i vinogradarstvo SSSR, 1956, No 7, 13-18

Abstract: On the basis of experimental data the author considers that in the industrial selection of yeast for champagne-processing in bottles, it is not sufficient to be guided by the outward appearance -- the roughness -- of the colonies. It is necessary to take into account the entire

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USSR /Chemical Technology. Chemical Products and Their Application I-31

Fermentation industry

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32901

complex of their properties. Different strains of the rough variants of yeast show different resistance to acid conditions. Under laboratory conditions the rough variants of yeast which are most acid-resistant are those that form colonies of largest size on acidified must-agar.

Card 2/2

RABINOVICH, Z.D.

Saprophytic and pathogenic fungi of jute in southern Ukraine.
Mikrobiologiia 25 no.2:217-220 Mr-Ap '56. (MLRA 9:7)

1. Odesskiy gosudarstvennyy universitet imeni Mechnikova
(FUNGI,
saprophytic & pathogenic on jute (Rus))
(PLANTS,
jute, saprophytic & pathogenic fungi on (Rus))

S/194/62/000/009/093/100
D413/D308

9,3280

AUTHOR: Rabinovych, Z. D.

TITLE: The design of self-biased trigger circuits

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 9, 1962, abstract 9-7-219 i (Zb. prats z obchysl. matem. i tekhn., v. 2, kiev, AN URSR, 1961, 77-86 (Ukr.; summary in Rus.))

TEXT: The proposed method for designing self-biased valve trigger circuits is based on obtaining the widest possible symmetrical range of variation of grid voltage for the initial valve type, anode current and output voltage drop or supply voltage drop. The calculation takes account of grid current. With relatively simple calculation one can derive the necessary characteristic values for the trigger circuit to a high accuracy, and one can vary its parameters extensively enough in the process of applying it to selected initial conditions. After the analysis and the derivation of

Card 1/2

RABINOVICH, Z. G.

Rabinovich, Z. G. "On the problem of concealed and visible petrositis", Sbornik trudov Leningr. nauch.-issled. in-ta po boleznyam ukha, nosa, gorla i rechi, Vol. IX, 1948, p. 206-15, - Bibliog: 16 items.

SO: U - 3042, 11 March 53, (Letopis "Zhurnal "nykh Statey, No. 7, 1949)

S/194/62/000/009/093/100
D413/D308

9,3240

AUTHOR: Rabinovych, Z. D.

TITLE: The design of self-biased trigger circuits

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 9, 1962, abstract 9-7-219 i (Zb. prats z obchysl. matem. i tekhn., v. 2, kiev, AN URSR, 1961, 77-86 (Ukr.; summary in Rus.))

TEXT: The proposed method for designing self-biased valve trigger circuits is based on obtaining the widest possible symmetrical range of variation of grid voltage for the initial valve type, anode current and output voltage drop or supply voltage drop. The calculation takes account of grid current. With relatively simple calculation one can derive the necessary characteristic values for the trigger circuit to a high accuracy, and one can vary its parameters extensively enough in the process of applying it to selected initial conditions. After the analysis and the derivation of

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D413/D308

The design of ...

design formulas, a short description is given of the sequence of design. 4 references. [Abstracter's note: Complete translation.]

Card 2/2

RABINOVICH, Z. G.

Rabinovich, Z. G. "On the problem of concealed and visible petrositis", Sbornik trudov Leningr. nauch.-issled. in-ta po boleznyam ukha, nosa, gorla i rechi, Vol. IX, 1948, p. 206-15, - Bibliog: 16 items.

SO: U - 3042, 11 March 53, (Letopis "Zhurnal "nykh Statey, No. 7, 1949)

RABINOVICH, Z. L.

Dashevskiy, L. N. and Rabinovich, Z. L. - "Amplified cascade with the stabilization of anode current," Sbornik nauch.-tekhn. statey (Akad. nauk Ukr. SSR, In-t elektrotekhniki), Issue 2, 1948, p. 11!-21

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

RABINOVICH, Z.L.; FURMAN, N.I.

Phase and frequency meter for extremely low frequencies. Sbor.trud. Inst.elektrotekh. AN URSR no.10:107-115 '53. (MLRA 8:5)
(Automatic control) (Electric measurements)

81663

S/112/60/000/05/11/023

16.6800

Translation from: Referativnyy zhurnal. Elektrotekhnika. 1960, No. 5, p. 323, # 4.4321

AUTHOR: Rabinovich, Z. L.

TITLE: The Arithmetic Unit of the "ЭСМ-1" (SESM-1) Electronic Special-Purpose Computer

PERIODICAL: Sb. tr. Vychisl. tsentra. AS UkrSSR, 1958, No. 3, pp. 18-31

TEXT: The SESM-1 computer is used for solving systems of linear algebraic equations by the Seidel method. The arithmetic unit of the serial computing machine, operates with binary codes. The point is fixed before the top digit. A megnetic drum is used as operating memory unit. Initial data and operation results are represented by 28-digit numbers. Intermediate operation results can occupy 32 digits, for this purpose 4 spare digits are provided on the left side of the point. The selection of a serial arithmetic unit considerably reduced the quantity of electronic equipment in comparison with parallel arithmetic units. Moreover the speed of the SESM-1 machine was not reduced since it is limited by the input rate of initial data of the problem. When introducing the next

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The Arithmetic Unit of the "СЭСМ-1" (SESM-1) Electronic Special-Purpose Computer

equation coefficient, the arithmetic operations are carried out with the preceding one, and their cycle is completed earlier than the input cycle. The serial adder is the main part of the arithmetic unit, consisting of two code inverters which are necessary for operations with negative quantities, adding unit and lag element producing the carry pulses. An addition operation consists of two cycles, the basic cycle and the auxiliary one. During the basic cycle both addends enter the adder, during the auxiliary cycle the code of results of the basic cycle goes into the adder. When adding two negative numbers, their code is not inverted, but the sign code is formed by the coincidence circuit and is carried out in the auxiliary cycle. When adding positive numbers, the auxiliary cycle is preserved. The operation is made up of r addition operations, where r is the quantity of digits of the number after the point. During the last multiplication cycle a rounding off unit is added to the lowest digit. The sign of the product is determined with the aid of a computing flip-flop stage. The fixing of all codes in the arithmetic unit is effected on a special operative bay of the magnetic drum. The codes are dynamically fixed on the magnetic drum by code rewriting with the aid of double magnetic heads. When the span between the heads is equal to the length of the code place, the period of the rewrite cycle is equal to the passing

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The Arithmetic Unit of the "C3CM-1" (SESM-1) Electronic Special-Purpose Computer

period of the code place and the rewrite is carried out without shift (rewrite of the partial sum, of the multiplicand). If the span is smaller than the code place, the code is shifted to the side of the lowest digits (factor code). Moreover, at every cycle the following digit of the factor is singled out, which is controlled by the passing of the multiplicand onto the adder. The codes of partial products are shifted by 2 digits to the side of the lowest digits, thereby compensating the lag of the adder and effecting a correct summation by digits. The author gives a functional circuit diagram, a time diagram and operating tables of the serial adder. He describes the circuit diagram of the code rewrite process and the time commutation of arithmetic unit circuits. Time diagrams are given for multiplication, addition, number inversion, formation of sign codes and cyclic unit. It is pointed out that the SESM-1 computer has passed on experimental operation. There are 6 figures, and 3 references.

V. D. S.

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81664

16.6800 S/112/60/000/05/12/023

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1960, No. 5, pp. 324-325, # 4.4335

AUTHORS: Rabinovich, Z. L., Gladysh, A. L., Parkhomenko, I. T.

TITLE: The Element Structure of the СЭСМ-1 (SESM-1) Special Purpose Computer

PERIODICAL: Sb. tr. Vychisl. tsentra. AN UkrSSR, 1958, No. 3, pp. 45-54

TEXT: The authors describe the system of standard tube elements for the electronic SESM-1 digital computer of the Vychislitel'nyy tsentr AN UkrSSR (Computing Center of the AS UkrSSR) which includes 11 types of elements: shaper, shaper with delay (2 types), flip-flop, coincidence and potential segregation unit (2 types), pulse segregation unit, potential amplifier, cathode follower, pulse - potential gate and coincidence gate utilizing several inputs. Pulse sources of the computer are the magnetic drum and the punched tape, potential sources are represented by the flip-flops. A diagram of the element structure of the computer is given, showing all possible connections between both the standard and the special elements. The pulse amplitude of the computer is 30-50 v with a duration of 1-2 μ sec. The rated values are 40 v and 1.5 μsec, which

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The Element Structure of the СЭСМ-1 (SESM-1) Special Purpose Computer

exceeds twice the sensitivity of the flip-flop and three times that of the shaper. The frequency range is 0-75 kc, the rated frequency is 50 kc. The control potential have levels of +15 and +95 v. The potential drop exceeds twice the pulse magnitude. The threshold of sensitivity is 12 v. The shaper permits a load of 100 ohm or 6,800 picofarad. The flip-flop is connected to the load by cathode followers with 6Н8 (6N8) tubes. Power cathode followers with 6П9 (6P9) tubes permit a load of up to 1,4 kohm. Coincidence and segregation circuits are composed of diodes. The split commutation makes it possible to form various logical combinations. The gate systems are of the diode - transformer type. The authors give the basic circuit diagrams of all elements with their parameters. There are 12 figures, and 1 reference.

G. A. Kh.

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S/194/61/000/006/013/077
D201/D302

9,7100

AUTHORS: Glushkov, V.M., Rabinovich, Z.L. and Voytova, Ye.L.

TITLE: Analysis of trigger transients by an electron digital computer

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1961, 38, abstract 6 B282 (V sb. Vses. Mezhvuz. konferentsiya po teorii metodam rascheta nelineynykh elektr. tsepey, no. 2-П (P), Tashkent, 1960, 95-112)

TEXT: Description of methods used and of certain preliminary results of mathematical analysis by the computer 'Ural' of transients of a trigger are given. The analysis was undertaken in order to explain certain fine details of the mechanism of trigger operation and to determine possible ways of its design from the point of view of its operating reliability. The trigger circuit investigated was that used in the БЭСМ (BESM) computer. The analysis was

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S/194/61/000/006/013/077
D201/D302

Analysis of trigger transients...

performed by means of the actual solution of a system of non-linear differential equations by the 'Ural' computer. It was thus possible to analyze the mechanism of trigger operation and to understand the relationship between the reliability of the switch-over and the speed of trigger operation. The preliminary results of the analysis are given. 11 figures. 4 references. [Abstracter's note: Complete translation]

VB

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PHASE I BOOK EXPLOITATION SOV/5421

Rabinovich, Zinoviy L'vovich, Yuriy Vladimirovich Blagoveshchenskiy, Rostislav Yakovlevich Chernyak, Anna Leonidovna Gladysh, Ivan Timofeyevich Parkhomenko, Ivetta Petrovna Okulova, Lidiya Aleksandrovna Mayboroda, and Stanislav Sergeyevich Zabara.

Spetsializirovannaya elektronnaya schetnaya mashina SESM (SESM Specialized Electronic Computing Machine) Kiyev, Izd-vo AN UKrSSR, 1961. 144 p. 5,500 copies printed.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Vychislitel'nyy tsentr.

Resp. Ed.: V.M. Glushkov, Corresponding Member of the Academy of Sciences of the Ukrainian SSR; Ed. of Publishing House: I.V. Kisina; Tech. Ed.: A.M. Lisovets.

PURPOSE: This book is intended for personnel engaged in the design and operation of computing machines and also for specialists in related branches of science who are acquainted with the fundamentals of computing technique and computing mathematics.

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SESM Specialized Electronic Computing Machine SOV/5421

COVERAGE: The book describes the SESM (specialized electronic computing machine), which is intended for the solution of systems of linear algebraic equations and the computation of correlation functions. The authors discuss the methods of linear algebra used in the machine, its operating principles and those of its assemblies, circuits, and components. The authors credit Academician S.A. Lebedev with the fundamental idea and outline for the machine. The book was prepared by a group of staff members of the Computing Center AS UKrSSR under the direction of Z.L. Rabinovich, Candidate of Technical Sciences, who also wrote Sections II, IV, VIII, and IX. Section I was written by Yu.V. Blagoveshchenskiy, Candidate of Physics and Mathematics; Sections III, V, and XI were written by R.Ya. Chernyak, Candidate of Technical Sciences; Sections IV, VIII, and X by I.T. Parkhomenko, Engineer; Sections IV and IX by A.L. Gladysh, Engineer; Section VII by I.P. Okulova, Engineer; and Section VI by L.A. Mayboroda and S.S. Zabara, Engineers. The authors thank L.N. Dashevskiy, Candidate of Technical Sciences, and V.V. Kraynitskiy, S.B. Pogrebinskiy, Ye.Ye. Dedeshko, A.Z. Libman, and K.V. Golovko, Engineers. No personalities are mentioned. There are no references.

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SESM Specialized Electronic Computing Machine SOV/5421

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AVAILABLE: Library of Congress

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AC/dwm/gmp
8-2-61

4306

B/194/62/000/010/005/084
A154/A126

17100

AUTHOR: Rabinovich, Z.L.

TITLE: Modernization of the SESM computer for computing correlation functions

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 10, 1962, 9 - 10, abstract 10-1-18e (Zb. prats' z obshysl. matem. i tekhn., T. 3. Kyiv, AN URSR, 1961, 70 - 75; Ukrainian; summary in Russian)

TEXT: A technique is given for computing normalized correlation functions with the aid of a modernized specialized СЭСМ(SESM) electronic computer, designed for solving systems of linear algebraic equations with several unknowns by the iterative method. The ordinates of the curve of the examined process are punched on tape. After the setting procedure the tape is run through as many times as required to obtain the values of the correlation function. Before the tape is run through, the computer is fed the value of the argument by means of toggle switches; the computed value of the function is printed. The basic

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Modernization of the SESM computer for ....

principle of the computing process consists in delaying all the input ordinates in accordance with the argument value, pairwise multiplication of the input ordinates with the delayed ordinates, and sequential storage of the sum of the products. The computing time is determined by the length of the tape. As the input cycle of each ordinate takes about 0.05 sec, computation of one point with 3,000 ordinates takes about 3 min. To modernize the computer it was only necessary to give its units certain additional functions. Operating experience showed the expediency of performing the described calculations on the computer. The principle of computing correlation functions on the SESM computer may be used in the development of digital correlators. There are 2 figures.

G.K.

[Abstracter's note: Complete translation]

S/777/61/000/000/003/005

AUTHOR: Rabinovich, Z.L.

TITLE: Problems of the construction of small computing machines with magnetic-drum memory.

SOURCE: Voprosy vychislitel'noy tekhniki; mashiny, ustroystva, elementy i ikh primeneniye. Ed. by A. M. Novik. Kiyev, Gostekhizdat USSR, 1961, 114-132.

TEXT: The paper sets forth the fundamental principles of the construction of several types of small computing machines, all of which are based on the utilization of a magnetic-memory drum. The principles examined permit a substantial increase in the speed of such machines and also of their effectiveness, which is characterized by the relationship of the rate of operation to the number of equipments required. The reasonings presented here follow from experience with magnetic-drum (MD) machines accumulated at the Computing Center, AS UkrSSR, the [illegible]3CM (SESM) machine, and others. An analysis of the basic shortcoming of the magnetic drum is made, namely, the time lost in waiting for the finding of a needed bit or read-out of a number. The general design principles of this type of machine are analyzed in detail. Means are discussed for a minimization of the search time through the use of a "dynamic sender" which comprises a regulatable delay with a

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controllable output-input closure by means of a pair of recording and playback magnetic heads. Through a suitable selection of the distance between the 2 heads it is possible to reduce the searching time to zero. If the searching time is zero, the total time for the carrying out of any given command is known, and the commands can be placed on the track of the magnetic drum at the intervals that are required for their fulfillment, thereby eliminating another source of lost time. The possibilities of additional savings of time through various sequences of commands are explored, following a general and fundamental discussion. The basic principles of the construction of computers utilizing magnetic drums are discussed for the parallel and the in-series arrangements, respectively. The basic design equations for the 2 types of machines are set forth in an analytical form which makes them suitable for a broad variety of ultimate requirements and arrangements. There are 11 Russian-language Soviet references.

35210
S/696/61/002/000/008/009
D299/D302

9.7500 (also 1159, 1161)

AUTHOR: Rabinovych, Z.L.

TITLE: Design of flip-flops with automatic shift

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Obchyslyuval'nyy tsentr. Zbirnyk prats' z obchyslyuval'noyi matematyky i tekhniky, v. 2, 1961, 77-86

TEXT: A fairly simple method is proposed for the design of flip-flops which, by taking into account the grid current, ensures high accuracy of the required parameter values and a sufficiently wide range of variation of the parameters during the operation of the device (in fact - the maximum possible for the given initial data). This compares favorably with existing methods, in which the grid current is neglected. A block diagram of the flip-flop, incorporating a double triode, is shown as well as the equivalent circuit. The computation of the flip-flop involves the following steps: 1) The output voltage is chosen, as well as the type of tube; the nominal current values are fixed and the corresponding resistance. 2) The cut-off voltage is determined from the tube characteristic.

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Design of flip-flops with ...

The excitation voltage is selected (from considerations of design) close to the nominal value. 3) The optimum values of the grid voltages are determined from 3 formulas. The computations are verified by other formulas. 4) The values of the various resistors (anode, - grid, -cathode, etc.) are computed, as well as the gain factor, the anode- and cathode voltages, and the grid current. The values of the grid current are checked The computations are verified by comparison with the equivalent circuit. 5) The allowed variations in the parameter values are checked. 6) From the expected value of the time constant $R_a(C+C_n)$, one obtains a tentative value of the capacitance C. The sensitivity of the flip-flop is estimated. 7) The parameters of the cathode followers are calculated. 8) The required values of the power of the resistors are calculated. 9) After the computations, the flip-flop is experimentally tested under static and dynamic conditions, and the capacitance C is corrected. The above computational method was experimentally verified. The discrepancy between computed and experimental values of the flip-flop parameters, did not exceed 5%. There are 3 figures and 4 references: 2 Soviet-bloc and 2

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Design of flip-flops with ...

non-Soviet-bloc. The references to the English-language publications read as follows: M. Rubinoff, Further Data on the Design of Eccles-Jordan Flip-Flops, El. Eng., no. 10, 1952; R. Pressman, Electronics, no. 4, 1953.

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RABINOVICH, Z.I. [Rabinovych, Z.L.]

Concerning a certain modification in multiplication.
Zbir. prats' z obchys. mat. i tekh. 2:102-104 '61.
(MIRA 15:2)
(Electronic calculating machines)

40534
S/044/62/000/008/070/073
C111/C222

C.9200

AUTHOR: Rabinovich, Z.L.

TITLE: Modernization of the mathematical machine СЭСМ (SESM) for the calculation of correlation functions

PERIODICAL: Referativnyy zhurnal, Matematika, no. 8, 1962, 65, abstract 8V381. ("Zb. prats' z obchisl. matem. i tekhn." T.3. Kyiv, AN URSR, 1961, 70-75)

TEXT: The author describes some variations in the scheme of the specialized computer SESM of the Vychislitel'nyy tsentr AN USSR (Computing Center AS UkrSSR). These variations make it possible to calculate normed correlation functions. These correlation functions are calculated according to the formula

$$\rho_N(k) \cong \frac{\sum_{i=1}^{N} y_i y_{i-k} - \frac{1}{N}\left(\sum_{i=1}^{i=N} y_i\right)^2}{\sum_{i=1}^{i=N} y_i^2 - \frac{1}{N}\left(\sum_{i=1}^{i=N} y_i\right)^2},$$

4

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Modernization of the mathematical ...

where y_i are the ordinates of the investigated process, N the number of the coordinates of the investigated process, k the interval between the coordinates multiplied with each other. However, the calculation of the correlation function according to this formula is connected with some difficulties, since a great memory for the storage of all ordinates and a great number of transmission data during the calculation process is necessary. These difficulties can be removed, if certain variations are introduced into the structure of the given computer. The block diagram of the modified machine is given and explained. For the calculation of the correlation function on the modernized machine the ordinates of the investigated process curve are perforated successively on a punched tape. This punched tape is let through the input system for so many times as values of the correlation function are necessary. The basic principle of the calculation is the fixation of the introduced ordinates corresponding to the argument value, pairwise multiplication of the introduced coordinates with the fixed ones and accumulation of the sum of the products.

4

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Modernization of the mathematical ...

Note of the reviewer. The formula for the calculation of the correlation function has an error as it stands.

[Abstracter's note : Complete translation.]

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RABINOVICH, Z.L.; PODKOLZINA, K.M.; SHLYAKHOVA, N.I.; MIKHNOVSKIY, S.D. [Mikhnovs'kyi, S.D.]; GALENKO, D.N. [Halenko, D.M.]

Arithmetic calculator with increased computing speed. Zbir. prats' z obchys. mat. i tekh. 3:76-83 '61. (MIRA 15:2)
(Calculating machines)

RABINOVICH, Z. L.

"Operator representation of logic circuits in computers on the basis of vector switching functions"

report submitted for the Intl. Symposium on Relay Systems and Finite Automata Theory (IFAC), Moscow, 24 Sep-2 Oct 1962.

YUSHCHENKO, K.L., kand. fiz.-matem. nauk, otv. red.; RABINOVICH, Z.L.[Rabinovych,Z.L.], kand. tekhn. nauk, otv. red.; LABINOVA, N.M., red.; BEREZOVSKAYA, D.N.[Berezovs'ka, D.N.], tekhn. red.

[Computer mathematics and technology] Obchysliuval'na matematyka i tekhnika. Kyiv, Vyd-vo AN URSR, 1963. 128 p. (MIRA 16:11)

1. Akademiya nauk URSR, Kiev. Instytut kibernetyky.
(Electronic computers)

RABINOVICH, Z.L., kand. tekhn. nauk; MATSEVITYY, L.V.; KARTASHEV, V.I.

Universal logical unit and its use. Avtom. i prib. no.2:39-42 Ap-Je '63. (MIRA 18:8)

1. Institut kibernetiki AN UkrSSR.

RABINOVICH, Z.L. (Kiyev); IVAS'KIV, Yu.L. (Kiyev)

Certain class of canonical forms of the presentation of three-valued functions. Izv. AN SSSR. Tekh. kib. no.5:27-34 S-O '63. (MIRA 16:12)

RABINOVICH, Z.L. [Rabinovych, Z.L.]; YEREMA-YEREMENKO, A.A. [IErema-IEremenko, A.A.]

Calculating the sensitivity of a trigger with automatic bias. Dop. AN URSR no.8:1009-1014 '63. (MIRA 16:10)

1. Institut kibernetiki AN UkrSSR. Predstavleno akademikom AN UkrSSR V.M.Glushkovym [Hlushkov, V.M.].
(Electric computers)

ACCESSION NR: AP3004962 S/0208/63/003/004/0755/0765

AUTHORS: Rabinovich, Z. L.; Kapitonova, Yu. V. (Kiev)

TITLE: General principles for synthesis of combinative schemes

SOURCE: Zhurnal vy*chisl. matematiki i matematich. fiziki, v. 3, no. 4, 1963, 755-765

TOPIC TAGS: combinative scheme, logical control, Boolean operation, efficient synthesis, algorithm, functional element, Boolean function, inverse relation, automatization, electronic scheme, logical operator

ABSTRACT: The existing methods of synthesis of logical schemes not containing inverse connections in fact treat only the first part of this problem, namely, composition and minimization of logical controls in Boolean operations. The remaining stages are: 1) expression of Boolean controls in a given system of operators; 2) guarantee of the required quality of the physical characteristics of the scheme; 3) comparison with variants of the scheme. Algorithms for 1), 2), and 3) would facilitate most efficient synthesis and open the way for its complete automatization via computers. In this article the indicated stages of synthesis are formalized. A general plan for synthesis of combinative schemes is presented,

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ACCESSION NR: AP3004962

and also a study is made of certain peculiarities of it with respect to an impulse-potential element of the structure as having the widest collection of functional elements. The basic principles of the method are first considered, and then the algorithm is formulated. "This work was discussed in a seminar on the theory of automata and computing machines in the Institut Kibernetiki AN USSR (Institute for Cybernetics, AN UkrSSR), conducted by V. M. Glushkov. The authors express their unbounded gratitude to the leader of the seminar and its participants." Orig. art. has: 7 formulas.

ASSOCIATION: none

SUBMITTED: 20Aug62 ENCL: 00

SUB CODE: MA NO REF SOV: 002 OTHER: 000

Card 2/2

L 46289-65 EWT(d)/T IJP(c) GS

ACCESSION NR: AT5009054 S/0000/64/001/000/0171/0177

AUTHOR: Rabinovich, Z. L. (Kiev); Chernyak, R. Ya. (Kiev); Zlobina, G. I. (Kiev)

TITLE: Digital correlators of the Computer Center of AN UkrSSR 23 B+1

SOURCE: Konferentsiya po avtomaticheskomu kontrolyu i metodam elektricheskikh izmereniy. 3d, Novosibirsk, 1961. Avtomaticheskiy kontrol' i metody elektricheskikh

Redizdat Sib. otd. AN SSSR, 1964, 171-177

TOPIC TAGS: digital correlator, special purpose computer, correlation function, autocorrelation function

16

ABSTRACT: The article describes work done on the design of special correlators at the Computation Center of AN UkrSSR, simultaneously with mathematical research on questions of correlational analysis, under the guidance of V. S. Mikhalevich. Specifically, a special electronic computer (SESM) is described, intended for the

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ACCESSION NR: AT5009054

solution of systems of linear algebraic equations and for the calculation of correlation functions, and a computer specially developed for the calculation of correlation functions. Both types of machines calculate autocorrelation functions in the form

$$\rho(k) = \frac{\frac{1}{N-k}\sum_{i=1}^{N-k} x_i x_{i+k} - \bar{x}^2}{\frac{1}{N}\sum_{i=1}^{N} x_i^2 - \bar{x}^2}; \quad \bar{x} = \frac{1}{N}\sum_{i=1}^{N} x_i$$

and correlation functions in the form

Card 2/5

ACCESSION NR: AT5009054

0

$$r(k)=\frac{\frac{1}{N-k}\sum_{i=1}^{N-k}x_iy_{i+k}-\bar{x}\bar{y}}{\sqrt{\frac{1}{N}\sum_{i=1}^{N}x_i^2-\bar{x}^2}\cdot\sqrt{\frac{1}{N}\sum_{i=1}^{N}y_i^2-\bar{y}^2}};\qquad \bar{x}=\frac{1}{N}\sum_{i=1}^{N}x_i;\quad \bar{y}=\frac{1}{N}\sum_{i=1}^{N}y_i.$$

A block diagram of the SESM is shown in Fig. 1 of the Enclosure. The second variant has already been described in the literature (Avtomatika i priborostroyeniye,

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L 46289-65

ACCESSION NR: AT5009054

per second. 10. Output rate - 1/number in 0.2 sec. The computer employs a total of 432 miniature lamps and 2500 semiconductor diodes. Orig. art. has: 2 figures and 4 formulas.

ASSOCIATION: None

SUBMITTED: 13Apr64 ENCL: 01 SUB CODE: DP, IE

NR REF SOV: 002 OTHER: 000

Card 4/5

L 46288-65 EWT(1)/EEC(b)-2/EWA(h) Pm-4/Po-4/Pq-4/Pg-4/Peb/Pl-4 GS

ACCESSION NR: AT5009055 S/0000/64/001/000/0178/0183

AUTHOR: Rabinovich, Z. L. (Kiev); Komukhayev, E. I. (Kiev) 32 B+1

TITLE: Procedure for investigating the dynamic relaibility of elements of digital computers 25

SOURCE: Konferentsiya po avtomaticheskomu kontrolyu i metodam elektricheskikh iz- [illegible] Novosibirsk, 1961. Avtomaticheskiy kontrol' i metody elektricheskikh

Redizdat Sib. otd. AN SSSR, 1964, 178-183

TOPIC TAGS: digital computer element, flip flop, pulse shaping network, dynamic reliability, static reliability

ABSTRACT: The authors first point out the difference between static and dynamic reliability, and show that whereas the former is relatively easy to measure, the

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ACCESSION NR: AT5009055

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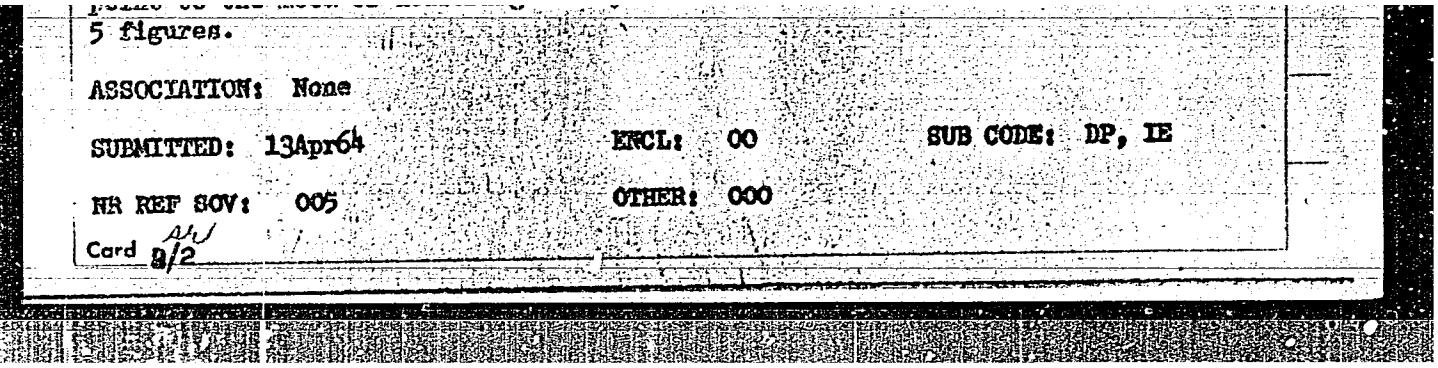
latter, which is a measure of correct operation of equipment under noise conditions, is more complicated. They therefore describe circuits for determination of dynamic stability of flip-flops and pulsed amplifiers, which permit an investigation of both an investigation of the character of the operation of the equipment and to vary the operating conditions of the tested elements so as to disclose the causes of failure. The article describes in detail the equipment for the determination of the number of flip-flop failures, the circuit for determining the transient time of flip-flop operation, and the circuit for determining breakdown of pulse shaping network. The elements employed are those of the electronic digital computer "Kiev". All circuits are based on the principle of logical comparison of the presence of



5 figures.

ASSOCIATION: None

SUBMITTED: 13Apr64 ENCL: 00 SUB CODE: DP, IE

NR REF SOV: 005 OTHER: 000

Card 2/2

L 62810-65 EWT(d)/T IJP(c) GS

ACCESSION NR: AT5018234 UR/0000/65/000/000/0215/0219

20
BH

AUTHOR: Rabinovich, Z. L.

TITLE: Operator representation of computer logic circuits by vector switching functions

SOURCE: International symposium on the theory of relay systems and finite automata. Moscow, 1962. Teoriya konechnykh i veroyatnostnykh avtomatov (Theory of finite and

probability type automata); trudy simpoziuma. Moscow, Izd-vo Nauka, 1965, 215-219

TOPIC TAGS: vector function, computer circuit logic, switching circuit, operator equation

ABSTRACT: Vector switching functions are suggested as a convenient language for the computer representation of events and consequently for use in the synthesis of logic circuits. One can simultaneously express the event and the circuit corresponding to it in the language of vector switching functions. The arguments of the functions are the so called logic time variables, possessing time coordinates denoting the beginning and end of the time segment during which the event occurred, e.g. (X_{t1-t2}). In the time segment t_1-t_2 the variable X has one value--either 1 or 0,

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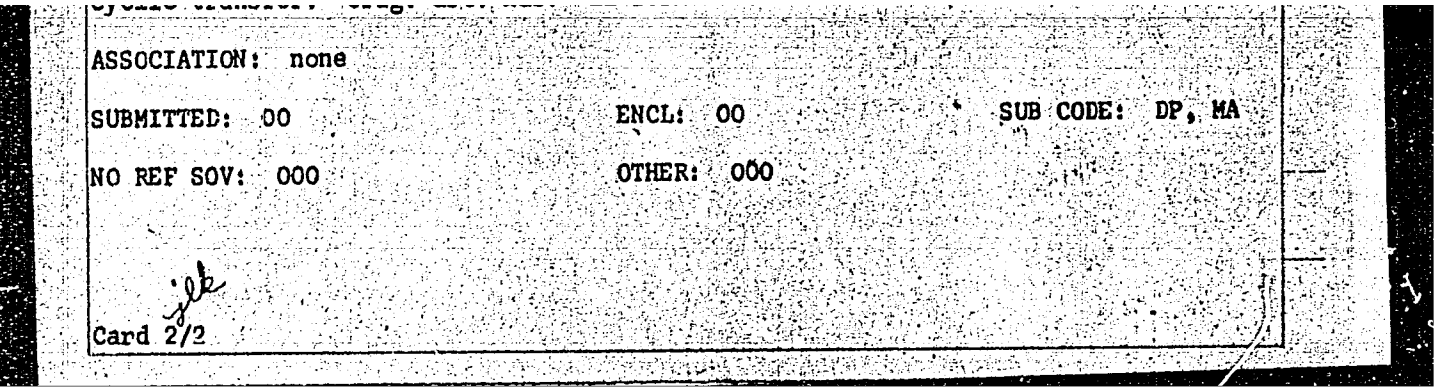
ACCESSION NR: AT5018234

0

and outside the interval $X = 0$. The system of operator algebra of the functions consists of usual operations in the algebra of logic and additional special operations on the fluctuating time coordinates of the variables. The first type of operations are those which preserve the time of occurance of the argument, while the second type of operation is one in which the time of occurance is not preserved. These operations allow one to form the necessary functions from alternating arguments, combining their time coordinates. The conditions for functional completeness are



ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: DP, MA

NO REF SOV: 000 OTHER: 000

Card 2/2

L 54583-65 EWT(d)/EED-2/EWP(1) Pq-4/Pg-4/Pk-4 IJP(c) BB/GG
ACCESSION NR: AP5012127 UR/0378/65/000/001/0092/0099
51:681.142

AUTHOR: Gladun, V. P.; Rabinovich, Z. L.

TITLE: Fast sorting algorithms within the operative memory

SOURCE: Kibernetika, no. 1, 1965, 92-99

TOPIC TAGS: sorting algorithm, operating memory, rapid sorting, algorithm speed

ABSTRACT: Two sorting algorithms within the operative memory are discussed. They are based on special matrices which register keys of the sorting rows and are effective if the

point of view of their speed. Orig. art. has: 31 formulas and 1 figure.

Card 1/2

L 54583-65
ACCESSION NR: AP5012127

ASSOCIATION: None

SUBMITTED: 12Oct64 ENCL: 00 SUB CODE: DP

NO REF SOV: 000 OTHER: 006

Card 2/2

L 54571-65 EWT(d)/T IJP(c)
ACCESSION NR: AP5012793 UR/0378/65/000/002/0037/0045
512.93:681.142.01

10
B

AUTHOR: Ayzenberg, N. N., Rabinovich, Z. L.

TITLE: Certain classes of functionally complete systems of operation and the canonical forms of representation of multivalued logic functions

16

SOURCE: Kibernetika, no. 2, 1965, 37-45

TOPIC TAGS: functionally complete system, canonical representation, multivalued logic function, logic function representation, logic system synthesis, multivalued structural alphabet, logical circuit design

ABSTRACT: Several functionally complete systems of operations in an m-valued logic are discussed in detail. These systems belong to two classes defined by two fixed con- [illegible] allowing the establishment of canonical forms of the dis-

Glushkov, who conducted the seminar for the theory of

Card 1/2

L 54571-65
ACCESSION NR: AP5012793

the results of this work were discussed, and the participants in this seminar." Orig. art. has: 53 formulas and 1 table.

ASSOCIATION: None

SUBMITTED: 15Dec64 ENCL: 00 SUB CODE: DP, MA

NO REF SOV: 007 OTHER: 002

Card 2/2

L 55995-65

ACCESSION NR: AP5009402 S/0208/65/005/002/0369/0372
681.142.2

15
B

AUTHOR: Gladun, V. P. (Kiev); Letichevskiy, A. A. (Kiev); Mikhnovskiy, S. D. (Kiev); Podkolzina, K. M. (Kiev); Rabinovich, Z. L. (Kiev)

TITLE: An extension of the logical possibilities of Algol-60 language

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 5, no. 2., 1965, 369-372

TOPIC TAGS: Algol language, computer language, computer programming

ABSTRACT: A variant of an extension of Algol-60 language is proposed in order to simplify the programming of non-arithmetic problems and to increase access to the intrinsic possibilities of the machine. In an effort to keep the language of Algol independent of the individual machine, only one machine parameter, the length of the machine word, was used in describing the semantics of the language. New variables are introduced: 1) a *string* is a variant of the Algol *line*: <line>::=any sequence of symbols not containing "or" |<empty>. 2) a *code* is defined syntactically as follows:
<code position>::=1|0

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L 55995-65

ACCESSION NR: AP5009402

0

<code>::=<code position>|<code>|<code position>.
The type *string* should be assigned to variables and functions used as primary line expressions, the type *code* to those used as primary code expressions. The logical operations are defined only for codes of equal length. The length of strings is limited by the number of symbols in a memory cell, as is the length of codes. The results were tested by application to several specific programs. "The work was discussed in a seminar on the theory of digital computers. The authors express their sincere gratitude for a number of valuable observations and advice to V. M. Glushkov, A. A. Stogniy, N. Z. Shor and others."

ASSOCIATION: none

SUBMITTED: 29Jun64 ENCL: 00 SUB CODE: DP

NO REF SOV: 000 OTHER: 001

Card 2/2

ACC NR: AP7003027 SOURCE CODE: UR/0378/66/000/003/0096/0099

AUTHOR: Rabinovich, Z. L. (Senior scientific collaborator)

ORG: none

TITLE: Review of activities of the seminar "Problems of the Theory of Mathematical Digital Electronic Computers" for 1965 and problems for 1966

SOURCE: Kibernetika, no. 3, 1966, 96-99

TOPIC TAGS: electronic computer, computer theory, digital computer

ABSTRACT: The seminar, "Problems of the Theory of Mathematical Digital Electronic Computers," led by Academician V. M. Glushkov, worked on the following basic topics in 1965: 1) Algorithmic structures of mathematical digital electronic computers (MDEC) (including all the characteristics of the computer, and determining the block diagram and the algorithm of its performance) and algorithmic synthesis (determining the algorithmic structure of the computer); 2) operation and control devices of MDEC and their block synthesis (determining necessary logic units and their functions, microprogramming operations, etc); 3) element structures of MDEC (the totality of its characteristics determining the procedure for performing elementary operations on digits in the computer) and the synthesis of its logic units; 4) methods for controlling the operation of MDEC and diagnosis of failures; and 5) methods and algorithms for processing information in the MDEC. In

Card 1/2 UDC: 681.142.1.01

ACC NR: AP7003027

1965, 36 papers were presented at the seminar, 12 of which were dedicated to the third topic.

In 1966 the seminar has been working on the following topics: 1) coding states and structural synthesis of diagrams, taking the properties of real physical elements into account; 2) theory of constructing digital elements utilizing automata with a many-valued structural alphabet; 3) algorithmization of the computing process in digital computers; 4) methods for synthesizing the control system in digital computers; 5) methods for structural designing of the digital computer; 6) digital modeling of algorithmic structures and microprograms for digital computers; 7) methods and algorithms of operations in digital computers; 8) languages for digital computers; 9) control methods and diagnostics for digital computers; 10) methods for processing nonnumerical information; 11) methods for processing large amounts of information on digital computers; 12) methods for calculating the parameters of element structures; 13) prospective element structures for digital computers; 14) problems in modular synthesis; 15) problems in the reliability theory as applied to discrete information-processing devices; and 16) hybrid machines. [ATD PRESS: 6043-F]

SUB CODE: 09 / SUBM DATE: none

Card 2/2

RABINOVICH, Z.M.

Ejector pumps for pumping out water from shafts and tabular wells.
Vod. i san. tekh. no.3:13-18 Mr '57. (MLRA 10:6)
(Centrifugal pumps)

ZAREMBO, L.K., kand. fiz.-mat. nauk; KARPOV, A.K., inzh.; LEGOSTAYEV, P.Ya., kand. tekhn. nauk; BRODSKIY, Yu.N., kand. tekhn. nauk; KHRENOV, N.S., inzh.; KHODANOVICH, I.Ye., kand. tekhn. nauk; BRISKMAN, A.A., kand. tekhn. nauk; GORODETSKIY, V.I., inzh.; NIKITIN, A.A., inzh.; GILL', B.V., inzh.; KRAYZEL'MAN, S.M., inzh.; DZHAFAROV, M.D., inzh.; LUNEV, A.S., kand. tekhn. nauk; NIKITENKO, Ye.A., inzh.; YERSHOV, I.M., kand. tekhn. nauk; ZAYTSEV, Yu.A., inzh.; MAGAZANIK, Ya.M., inzh.; SHAROVATOV, L.P., inzh.; RABINOVICH, Z.Ya., inzh.; BIBISHEV, A.V., inzh.; ASTAKHOV, V.A., dots.; KOMYAGIN, A.F., kand. tekhn. nauk; ANDERS, V.R., inzh.; SERGOVANTSEV, V.T., kand. tekhn. nauk, dots.; UTKIN, V.V., inzh.; KUZNETSOV, P.L., inzh.; MAMAYEV, M.A., inzh.; SVYATITSKAYA, K.P., ved. red.; FEDOTOVA, I.G., tekhn. red.

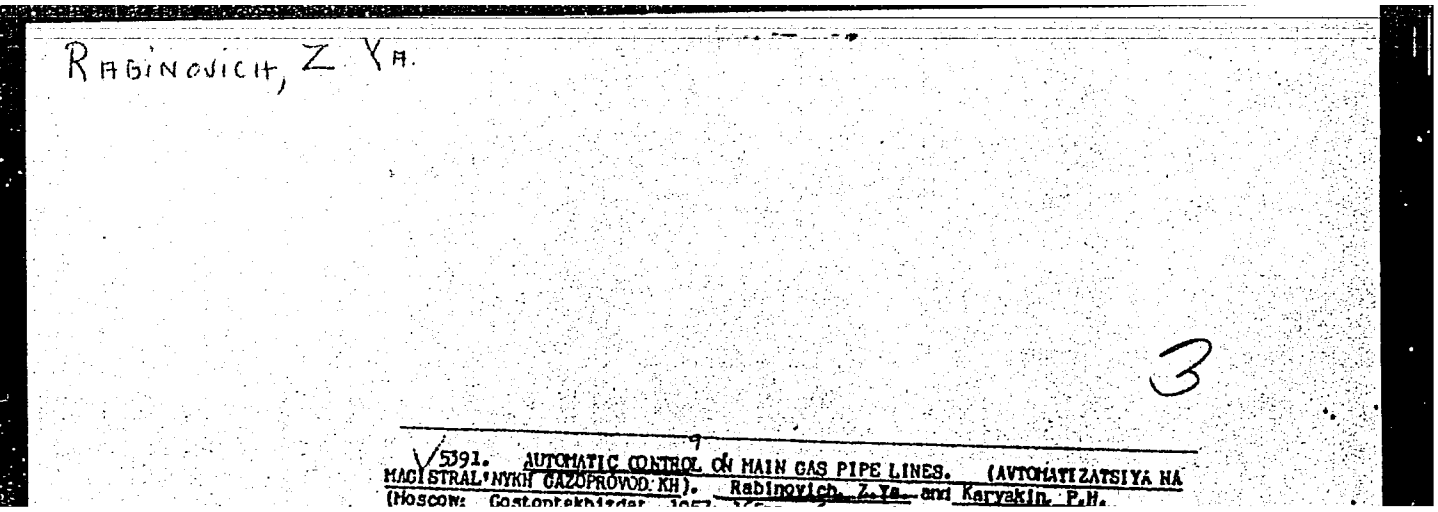
[Handbook on the transportation of combustible gases] Spravochnik po transportu goriuchikh gazov. Moskva, Gostoptekhizdat, 1962. 887 p. (MIRA 15:4)
(Gas, Natural--Transportation)

1. KARYAKIN, P. N.; RABINOVICH, Z. YA.
2. USSR (600)
4. Steam Boilers--Design
7. Automatic control of a steam boiler of small capacity, Energ. biul., No. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

RABINOVICH, Zinoviy Yakovlevich; KARYAKIN, Pavel Nikiforovich [deceased]
GOR'KOVA, A.A., vedyshchiy redaktor; POLOSINA, A.S., tekhnicheskiy redaktor

[Automatization of gas supply systems] Avtomatizatsiia na magistral'nykh gazoprovodakh. Moskva, Gos. nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1957. 165 p. (MLRA 10:5)
(Automatic control) (Gas, Natural--Pipelines)



RABINOVICH, Z. YA.

3

V5391. AUTOMATIC CONTROL ON MAIN GAS PIPE LINES. (AVTOMATIZATSIYA NA MAGISTRAL'NYKH GAZOPROVOD: KH). Rabinovich, Z.Ya. and Karyakin, P.N. (Moscow: Gostoptekhizdat, 1957.

RABINOVICH, Z.Ya.

KUZNETSOV, P.I.; RABINOVICH, Z.Ya.

Automation of circulating water pumps on the Saratov-Moscow gas pipeline. Gaz.prom.no.8:23-27 Ag '57. (MLRA 10:9)
(Pumping machinery) (Gas, Natural--Pipelines)

RABINOVICH, Z. YA.

6(5) PHASE I BOOK EXPLOITATION SOV/1730

Bibishev, Aleksey Vasil'yevich, and Zinoviy Yakovlevich Rabinovich

Elektrooborudovaniye gazovykh dvigateley (Electric Equipment of Gas Engines) Moscow, Mashgiz, 1958. 173 p. 5,000 copies printed.

Reviewer: A.M. Pribylovskiy, Engineer; Ed.: L.M. Yakovlev, Engineer; Ed. of Publishing House: Ye.Ya. Savel'yev; Tech. Ed.: V.D. El'kind; Managing Ed. for Literature on General Technical and Transport Machine Building: K.A. Ponomareva, Engineer

PURPOSE: This book is intended as a manual for engineers, technicians, and mechanics handling or overhauling gas engines.

COVERAGE: The electric equipment components of gas piston engines, gas turbine engines, and of gas-engine-driven compressors are described. Major ignition, protection and control devices including signal transmitting systems, low and high voltage magnetos which feed the electric system of gas engines, batteries

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and the chemical process in charging and discharging, spark plugs, induction coils, pyrometric units of gas engines, their operation, handling and overhauling are also dealt with in detail. The authors state that in view of the rapid development of the gas industry, the importance of using gas as the fuel for internal combustion engines is growing, and gas engines as well as powerful compressors driven by gas engines are being widely used in the Soviet petroleum, chemical and metallurgical industry. The authors utilized the practical experience gained in the operation of gas-engine-driven compressors and gas engines located in compressor stations of gas pipelines Saratov - Moscow and Kiyev - Moscow. The text is accompanied by numerous graphs, designs and tables. There are 11 Soviet references.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress (TJ787.B48)

Card 5/5

JP/ad
6-12-59

RABINOVICH, Z.Ya.

Simplified cooling of gas-motor compressors. Gaz. prom. no.3:49-51 Mr '58. (MIRA 11:3)
(Gas and oil engines--Cooling)
(Compressors)

BIBISHEV, Aleksey Vasil'yevich; RABINOVICH, Zinoviy Yakovlevich; PEREVERZEV, V.V., ved. red.; YAKOVLEVA, Z.I., tekhn.red.

[Maintenance and operation of equipment used in gas mains] Ekspluatatsiia oborudovaniia magistral'nykh gazoprovodov. Moskva, Gostoptekhizdat, 1963. 430 p. (MIRA 16:5)
(Gas--Pipelines) (Compressors)

RABINOVICH, Zelikh Yefimovich

Anglo-Russkii Tekstil'nyy Slovar. Moskva, Gos. Izd-Vo Tekhniko-Teoreticheskoy Lit., 1950
381 p.
Added T.P. in English.

RABINOVICH, Z.Ye., inzhener.

Reducing the breakableness of rayon silk. Tekst.prom. 14 no.7:23-24 Jl '54. (MLRA 7:8)
(Rayon)

RABINOVICH, Zelik Yefimovich, inzh.; Prinyali uchastiye: BUTOVICH, V.M., inzh.; LUPANDIN, K.K., inzh.-ekonom.; FEDOROV, V.I., inzh.; CHETYRKINA, Ye.N., prepodavatel'nitsa; SOBOLEV, E.A., nauchn.red.; KRASNOBORODSKAYA, L.L., red.; BOGATOVA, V.N., red.-leksikograf; YURCHENKO, D.I., red.-leksikograf; BRUDNO, K.F., tekhn. red.

[English-russian textile dictionary] Anglo-russkii tekstil'nyi slovar'. Izd.2., perer. i dop. Pod red. K.K.Lupandina. Moskva, Glav. red. inostr. nauchno-tekhn. slovarei Fizmatgiza, 1961. 640 p. (MIRA 14:8)

1. Moskovskiy tekstil'nyy institut (for Chetyrkina).
(Textile industry—Dictionaries)
(English language—Dictionaries—Russian)

RABINOVICH-NARODETSKAYA, L.A. (Alma-Ata)

Development and compensation of neurodystrophy in experimental osteomyelitis. Eksp. khir. 3 no.6:61-62 N-D '58. (MIRA 12:1)
(OSTEOMYELITIS) (SCIATIC NERVE)

USSR/Human and Animal Morphology - Normal and Pathological. S
Pathological Anatomy

Abs Jour : Ref Zhur Biol., No 23, 1958, 106031

Author : Rabinovich-Narodetskaya, L.A.
Inst :
Title : Histopathological Changes in the Muscles in Experimental Osteomyelitis

Orig Pub : Byul. eksperim. biol. i med., 1958, 45, No 5, 121-126

Abstract : Into the medullary canal of the left tibia of 105 rabbits and 10 dogs, 0.3 ml/kg cultures of Staphylococcus aureus (250 million microorganisms in 1 ml) were introduced. In the first series of experiments, three to four weeks after the manifestation of experimental osteomyelitis (EO), the sciatic nerve was divided and then sutured; in the second series, before the suturing of the nerve, vitamin B_1 was introduced into its peripheric segment; in the third series, vitamin B_1 was introduced

Card 1/3

Abs Jour : Ref Zhur Biol., No 23, 1958, 106031

into the intact nerve; in the fourth series, after the manifestation of EO, medicamentous sleep was induced (barbamyl); in the fifth series, EO was induced ten days after the division and the suture of the nerve; in the sixth series, simultaneously with EO, medicamentous sleep was induced; in seventh series (control), only EO was induced. The animals were killed three to six months after inoculation. By the method of impregnation of Bil'shovskiy-Gross-Lavreny'yev, left gastrocnemius muscles were studied. In the animals of the first and second series the manifestations of irritation of the nervous apparatus of the muscles were more pronounded than in the control series, and in the animals of the third and fourth series they were less marked. In the fifth and sixth series, the irritation and degeneration of the nervous apparatus were more pronounced than in

Abs Jour : Ref Zhur Biol., No 23, 1958, 106031

the control. The author considers that the preliminary division of the sciatic nerve and its immediate suture lowers the response of the animals towards the causative agent of osteomyelitis and aggravates the course of the pathological process. The introduction of vitamin B_1 into the uninjured nerve and treatment by sleep after inoculation have a favorable influence. The manifestations of irritation of the nervous apparatus of the muscles demonstrates the compensatory reaction of the nervous system.

RABINOVICH-RUBSHTEYN, G.

Moving-Picture Theaters

Hoist for the LPZ-1 screen curtain, Kinomekhanik, no. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

34044
S/109/62/007/001/025/027
D266/D301

9.3240 (1040, 1139, 1154)

AUTHOR: Rabinovich-Vizel', A.A., and Gertsenshteyn, M.Ye.

TITLE: On the bandwidth of frequency multipliers employing non-linear capacitance

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 1, 1962, 175 - 177

TEXT: The purpose of the paper is to determine the bandwidth of frequency multipliers using non-linear elements. The authors first survey available literature and conclude that the efficiency of this type of frequency multiplier has received much attention, but hardly anything has been written on the attainable bandwidth. Next they quote K.M. Johnson's formulas, slightly rearrange them and find for the product of relative bandwidth and optimum efficiency

$$\eta_{opt} \frac{\Delta f}{f} = \sqrt{b_n^2 + (\omega_1 \tau)^2} - \omega_1 \tau, \qquad (6)$$

where b_n depends on the nonlinear characteristics of the diode em-

Card 1/2

On the bandwidth of frequency ...

ployed, ω_1 - fundamental frequency, τ - time constant of the diode, n - factor of multiplication. For a lossless diode

$$\tau = 0,\ \eta = 1,\ \frac{\Delta f}{f} = b_n,\ (Q_{D_1} b_n)^2 \gg 1 \qquad (7)$$

where Q_{D_1} - quality of the diode at the frequency ω_1. In this case the bandwidth is dependent on n. If the losses are large $Q_{D_1} b_n \ll 1$, the bandwidth is mainly determined by the losses and independent of the harmonic number. If non-linear resistances are used there is no difficulty with bandwidth because broadband matching is possible. There are 5 references: 1 Soviet-bloc and 4 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: C.H. Page, J. Res. Nat. Bur. Standards, 1956, 56, 4, 179; G. Luettgenau, M.V. Duffin, and P.H. Dirnbach, IRE Wescon Convention Record, 1960, part 3, 13; P.M. Fitzgerald, T.H. Lee, M.S. Moy, E.J. Powers and J.J. Younger, IRE Weson Convention Record, 1960, part 2, 43; K.M. Johnson, IRE Trans., 1960, MTT-8, 5, 525.

SUBMITTED: July 20, 1961
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KARASEV, M.D.; KORABLEV, I.V.; RABINOVICH-VIZEL', A.A.

Measurement of amplitude fluctuations of a frequency multiplier using a nonlinear resistance. Radiotekh. i elektron. 7 no.11:1964-1966 N '62. (MIRA 15:11)

1. Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.
(Frequency multipliers)

L 12952-63 EWT(1)/BDS/EED-2/EEO-2 AFFTC/ASD/ESD-3
S/109/63/008/004/030/030 58

AUTHORS: Rabinovich - Vizel', A. A., and Gertsenshteyn, M. E.

TITLE: On relaxations in frequency multipliers with non-linear capacitance ("varactors") 25

PERIODICAL: Radiotekhnika i elektronika, v. 8, no. 4, 1963, 725-727

TEXT: The authors point out that resonance phenomena in ferrous-metal circuits are well known in low-frequency radio-technology. Relaxational oscillations can arise in such circuits by reason of the fact that the resonance frequency of the circuit, involving induction with iron metal depends on the amplitude of the current. A similar situation, they say, arises in the case of circuits using "varactors," i.e., diodes with a non-linear capacitance. They go on to explain that a change in capacitance alters the circuit resonance frequency ω_0. Thus, a circuit with a parametric diode, in terms of its characteristics, has much in common with circuits containing iron. This makes it possible, in principle, to lay out a diagram which would be analogous to a ferro-resonance stabilizer. What the authors are primarily concerned with in the present paper, however, is the generation of relaxational oscillations in high-precision circuits with parametric diodes. They explain that the resonance frequency of the circuit which includes the diode,

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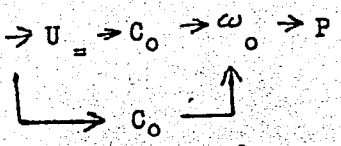
On relaxations in .....

depends on the power P delivered to the diode. A change in tuning of the circuit alters the value of P. Thus, in the simplest case, when the diode receives voltage only on a single frequency, the following closed chain obtains:



The authors explain that of the two branches of a resonance curve, the left one is stable, while the right one gives rise to the relaxational oscillations. Thus, in cases where only a single frequency is involved, in order to eliminate the relaxations, it is sufficient to place the working point along the stable branch of the resonance curve. The situation is more complicated when there is a combination of oscillations, involving several frequencies.

SUBMITTED: October 16, 1962

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